

WHAT IS CLAIMED IS:

- Sub B1
1. A method for deleting a nucleic acid sequence in a specified tissue of an organism from a DNA molecule introduced into the organism which comprises:
 - (a) introducing a DNA molecule into an organism, said DNA molecule comprises a recombinase site, a tissue-specific promoter, a recombinase gene, a foreign DNA and a recombinase site; and
 - (b) growing said organism such that the tissue-specific promoter is active for expression of said recombinase gene in the specified tissue, whereby said foreign DNA is deleted in the specified tissue during growth of the organism.
 2. The method of claim 1, wherein the DNA molecule further comprises a gene which is desired to be expressed in the organism.
 3. The method of claim 1, wherein said foreign DNA is heterologous DNA.
 4. The method of claim 2, wherein said foreign DNA is heterologous DNA.
 5. The method of claim 1, wherein said foreign DNA is a wild-type allele or fragment thereof of a gene for use in gene therapy.
 6. The method of claim 2, wherein said foreign DNA is a wild-type allele or fragment thereof of a gene for use in gene therapy.
 7. The method of claim 1, wherein the promoter is specific to the male or female gamete.
 8. The method of claim 7, wherein the DNA molecule further comprises a gene which is desired to be expressed in the organism.
 9. The method of claim 7, wherein said foreign DNA is heterologous DNA.

10. The method of claim 7, wherein said foreign DNA is a wild-type allele or fragment thereof of a gene for use in gene therapy.
11. The method of claim 7, wherein the introduction of the DNA molecule into an organism produces a transgenic organism and the foreign DNA is deleted during gametogenesis in the transgenic organism.
12. The method of claim 11, wherein said foreign DNA is heterologous DNA.
13. The method of claim 11, wherein said foreign DNA is a wild-type allele or fragment thereof of a gene for use in gene therapy.
14. The method of claim 8, wherein the introduction of the DNA molecule into an organism produces a transgenic organism and the foreign DNA is deleted during gametogenesis in the transgenic organism.
15. The method of claim 14, wherein said foreign DNA is heterologous DNA.
16. The method of claim 14, wherein said foreign DNA is a wild-type allele or fragment thereof of a gene for use in gene therapy.
17. The method of claim 1, wherein said organism is an animal.
18. The method of claim 1, wherein said organism is a plant.
19. The method of claim 17, wherein the animal is a knockout animal.
20. A nucleic acid molecule comprising (a) a recombinase site, (b) a tissue-specific promoter, (c) a recombinase coding sequence, (d) a foreign DNA and (e) a recombinase site.
21. The molecule of claim 20, wherein said recombinase site is selected from the group consisting of *loxP* and *FRT*.

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sub a2

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37. The non-human transgenic organism of claim 35, wherein said organism is an animal.

add B^5

ADD C4)

SECRET